Measures

- Hours Of Delay
- Transit Trips Per Capita
- Transit Revenue Miles
- HOV Use
  - I-95
  - I-64
- Park and Ride
- Bicycle Travel
- Pedestrian Travel
- Intercity Rail Service
- Freight Moved by Rail / Barge
- Performance Summary
- Print Section

Goal: Mobility, Connectivity and Accessibility

Facilitate the easy movement of people and goods, improve interconnectivity of regions and activity centers, and provide access to different modes of transportation

Grade = C

Mobility can be defined as the capability of moving people or goods from place to place. Two related concepts are connectivity and accessibility, where connectivity refers to the linkage among regions and centers of activity, and accessibility addresses the ability of people or goods to reach destinations by different modes of transportation.

Performance Measures

- Number of Hours of Delay in Metropolitan Areas
- Number of Transit Trips Per Capita
- Number of Annual Transit Revenue Miles
- Average Number of People-Per-Lane Using High Occupancy Vehicle (HOV) Lanes
- Number of Park and Ride Lots and Spaces
- Percentage of Virginians Riding Bicycles to Work
- Percentage of Virginians Walking to Work
- Percentage of Intercity Rail Service Trains Arriving On Time
- Percentage of Freight Moved by Rail and Barge

Performance Highlights

- The Washington, DC Metropolitan Area, which includes Northern Virginia, was the second most congested metropolitan area in the United States in 2007, with 62 annual hours of delay per person
- HOV usage declined in 2008, after steadily increasing in previous years
- Transit ridership per capita has steadily increased since 2004, to just over 25 trips per year
- 36% of freight moving through the Port was transported by rail or barge, and has steadily increased in recent years

Strategies

- Implement High Occupancy Toll (HOT) initiatives
- Increase utilization of commuter assistance programs in Virginia's metropolitan areas to:
  - Reduce the rate at which single occupant vehicles are added to the roads
  - Increase transit ridership
- Provide additional Park and Ride lots and spaces for public use
- Promote ride-sharing (van and car pool), bike, and walk-to-work programs
- Utilize Safety Service Patrol program to enhance incident management and reduce clearance times

- Continue to use the "511" Traveler Information Service to provide incident, average travel time, and alternate route information to the traveling public
- Promote Telework and Alternate Schedule initiatives to reduce peak-travel time traffic

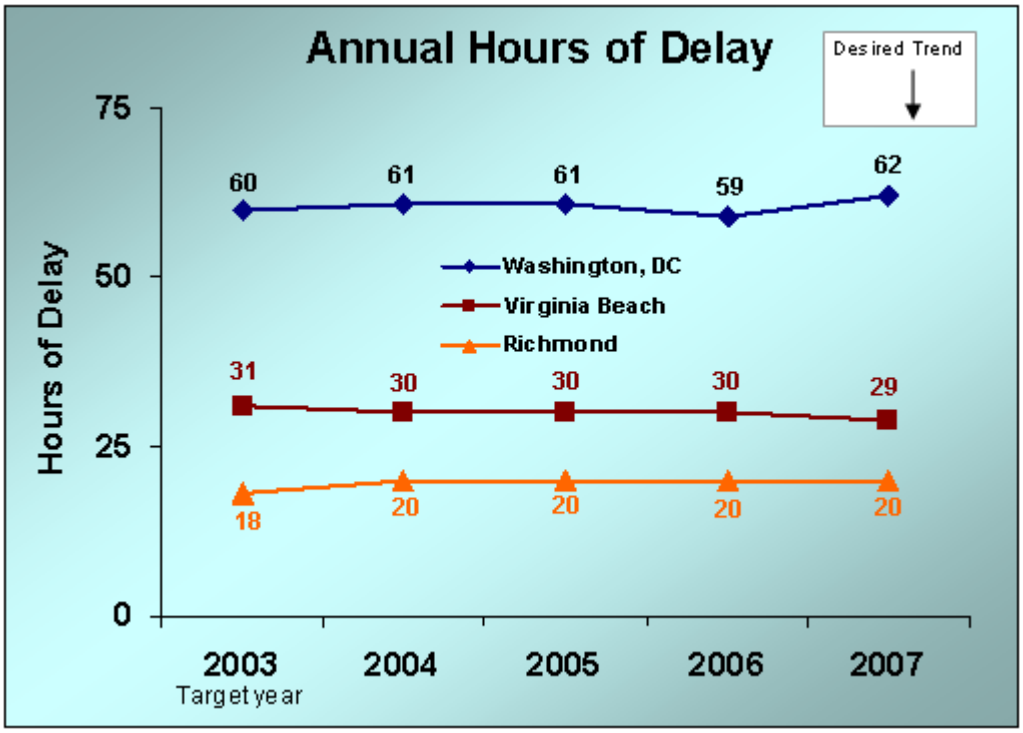
Hours of Delay

The Texas Transportation Institute (TTI) reported in its 2009 Urban Mobility Report that, in 2007, the typical Washington, DC area daily traveler needed 39% more time to get to his or her destination during peak travel periods, costing the region over $2.7 billion in lost productivity and wasted fuel. In 2007, each traveler in the DC area wasted 62 hours sitting in traffic; that was 11 hours more than the average for the nation's 26 largest cities, and 21 hours more than the national average of all 90 major urban areas covered by TTI's report. Each DC area traveler consumed an additional 42 gallons of gasoline per year in these congestion related delays. It is important to note that while TTI's latest report was released in the summer of 2009, it contains data from 2007.

Travel delay is measured as the extra travel time required over and above what would be experienced during free flow traffic conditions. Travelers in Richmond and Virginia Beach experienced delay lower than the national average, with delay levels remaining flat from 2004 through 2007 and with Virginia Beach showing slight improvement in 2007. The Washington, DC area had the second worst level of delay in the nation behind only the Los Angeles metro area.

In 2007, travelers in the Washington, DC area experienced an average of sixty two hours of traffic delay

The Commonwealth's goal is to mitigate the per-traveler level of peak period congestion delay, measured as an annual total, to at least the level of delay experienced by travelers in 2003 which were: 60 hours per year in the Washington DC/Northern Virginia metro area, 31 hours in the Hampton Roads metro area and 18 hours in the Richmond area.

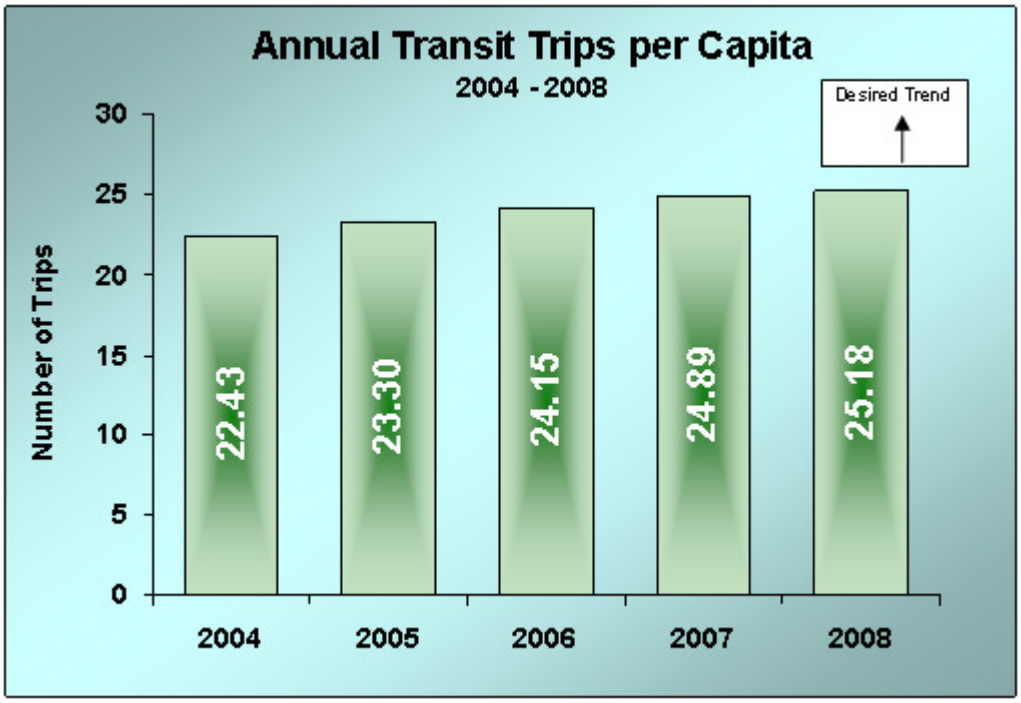


Source: Texas Transportation Institute, 2009 Urban Mobility Report

Transit Trips per Capita

Transit is an essential part of the transportation network in many areas of the Commonwealth and provides mobility and travel choices for Virginia's citizens and visitors. Transit ridership has increased each year since 2004 and the number of trips made on transit in the areas served by the 56 transit operators averaged just over 25 trips per Virginia resident in 2008.

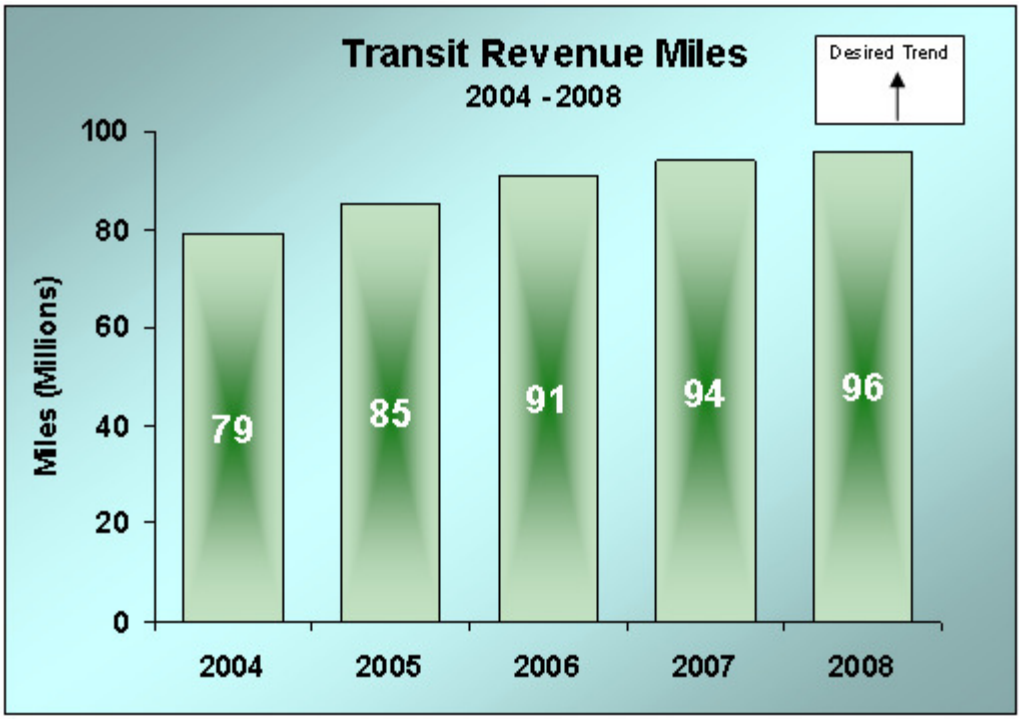
Transit relieves congestion and reduces delay by removing vehicles from the roadways. If public transportation were discontinued in Virginia, the 196 million transit trips made in 2008 would have been made in automobiles or not at all.



Source: Department of Rail and Public Transportation

Transit Revenue Miles

Transit revenue miles, or the miles traveled when the transit vehicle is in revenue service, increased to 96 million in 2008 which is an increase of 2.3% from the previous year when the Department of Rail and Public Transportation recorded over 94 million revenue miles. This measure is often considered an indicator of transit availability.



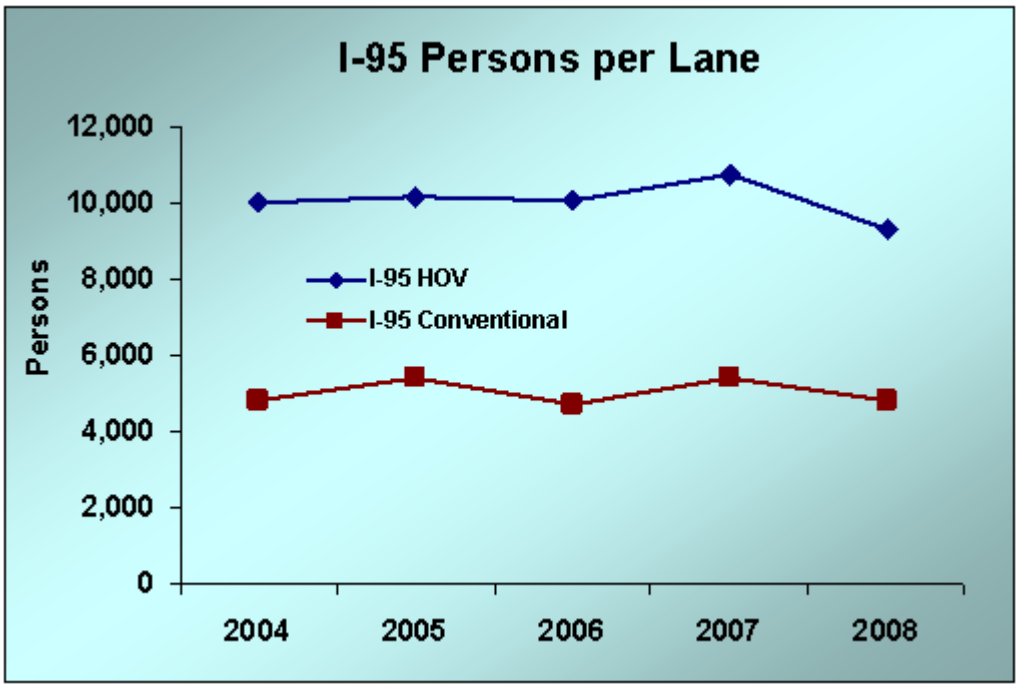
Source: Department of Rail and Public Transportation

HOV Use

Virginia has an extensive High Occupancy Vehicle (HOV) system in the Northern Virginia (NoVA) and Hampton Roads areas with over 137 miles of interstate lanes dedicated to carpools and buses during peak hours. However, the facilities differ in design and effectiveness. The Northern Virginia facilities on I-95/I-395 are separated from the conventional lanes by cement barriers and require three or more persons per vehicle. In Hampton Roads, the HOV lanes allow for two or more persons; some sections are separated by barriers from conventional lanes, some are not.

In a Northern Virginia survey performed in the Fall of 2008 taken between 6:00AM and 9:00AM on the outer loop of the Beltway, one I-95 HOV lane carried an average of 9,348 people per lane, while one conventional lane carried 4,801 people. From 2007 to 2008, in conjunction with the economic downturn, the number of persons carried per lane decreased in both HOV and conventional lanes.

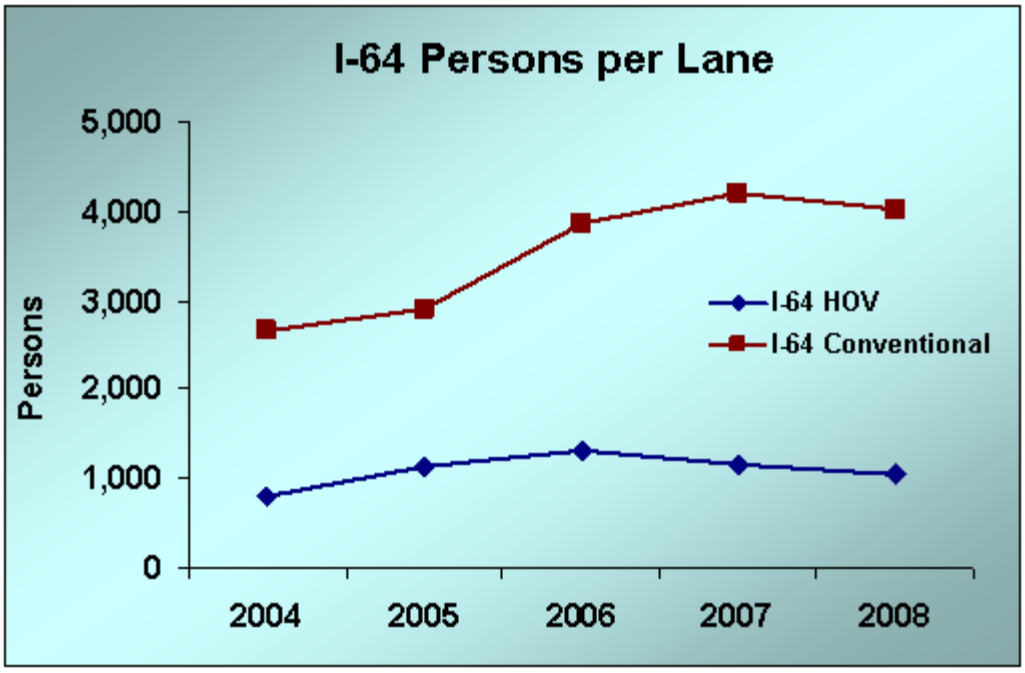
I-95



Source: Department of Transportation - Northern Virginia District Office

Similarly, a 2008 survey in Hampton Roads taken between 6:00AM and 8:00AM on a westbound segment of I-64, found that one I-64 HOV lane carried an average of 1,053 people while one conventional lane carried 4,014. As experienced in Northern Virginia, from 2007 to 2008 the number of persons carried per lane decreased in both HOV and conventional lanes

I-64



Source: Department of Transportation - Hampton Roads District Office

In 2008, carpoolers in Northern Virginia saved almost 25,000 hours each AM peak period while those in Hampton Roads saved about 2,200 hours.

Virginia has begun construction of High Occupancy Toll (HOT) lanes on the I-495 Capital Beltway in Northern Virginia. HOT lanes price travel based on the level of congestion by setting the fee to use the HOT lanes at a level that maximizes usage while keeping traffic flowing freely, thereby efficiently allocating road capacity based on market demand. As HOT lanes become congested, the toll increases. When completed in 2013, the project will provide two HOT lanes in each direction stretching 14 miles from the Springfield Interchange to just north of the Dulles Toll Road. HOV-3 vehicles and buses will be able to ride free while non-HOV vehicles will pay a variable toll to use the facility. In the future, these HOT lanes will connect with HOV lanes on I-95, HOV lanes on I-66 and the Dulles Toll Road to provide a seamless HOV network in the region.

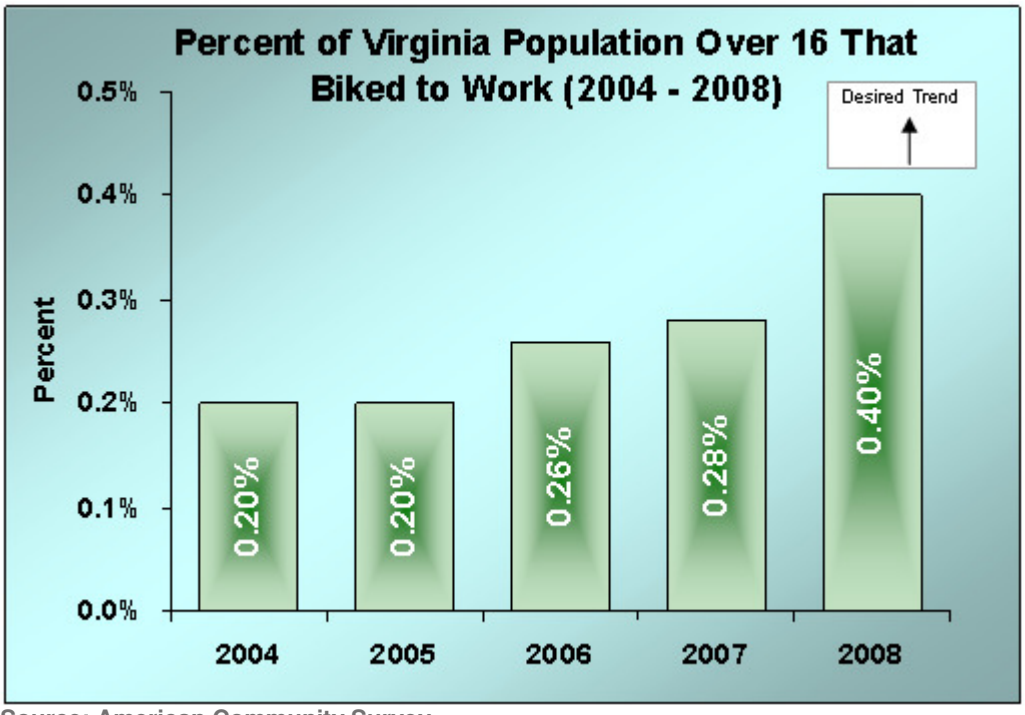
Park and Ride Spaces

There are approximately 330 Park and Ride lots statewide (114 lots owned by VDOT, 26 owned by local jurisdictions, transit companies, local colleges, etc., and approximately 189 lots that are "unofficial"). These lots provide nearly 63,500 spaces, an 8% increase from about 59,000 in 2007. Transit serves 139 lots containing approximately 46,500 spaces.

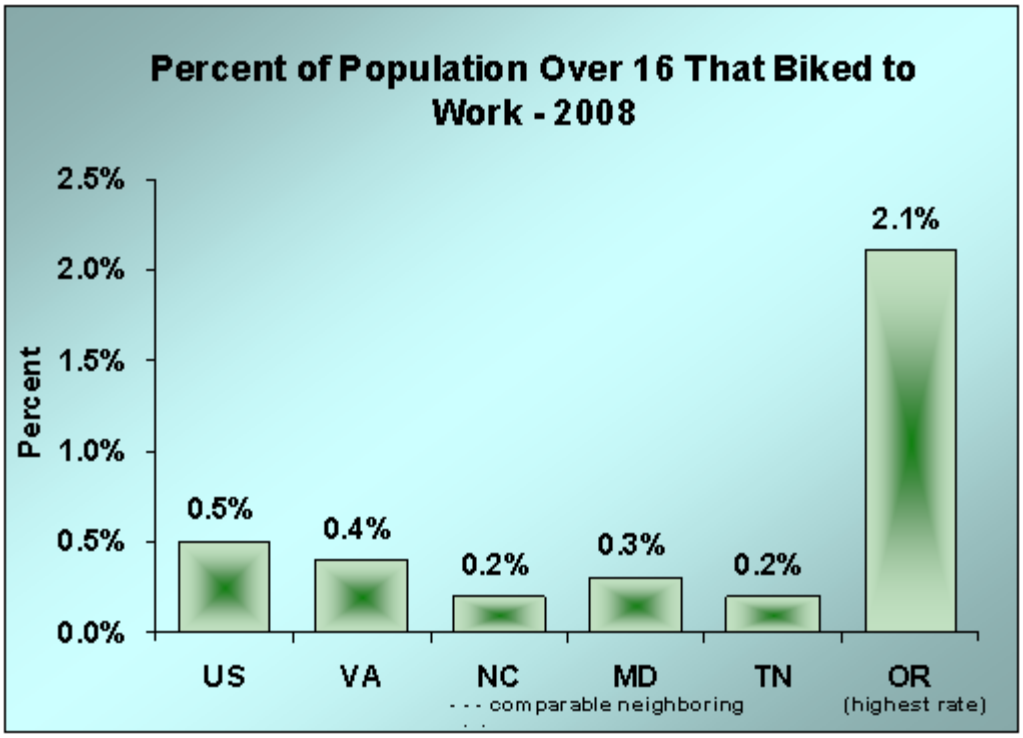
Bicycle Travel

Virginia continues to be a leader in the miles of numbered Bicycle Routes (USBR) with a total of 838 miles representing over 41% of the nation's total USBRs. In 2004, the Commonwealth developed a State Bicycle and Pedestrian Policy that requires VDOT to initiate all highway construction projects with the assumption that they will accommodate bicycling.

Based on the 2008 American Community Survey (ACS), which is administered by the US Census, 0.4% of Virginia citizens over 16 rode a bicycle to work, an increase from 0.28% in 2006. This is lower than the national average of 0.5%.



Source: American Community Survey

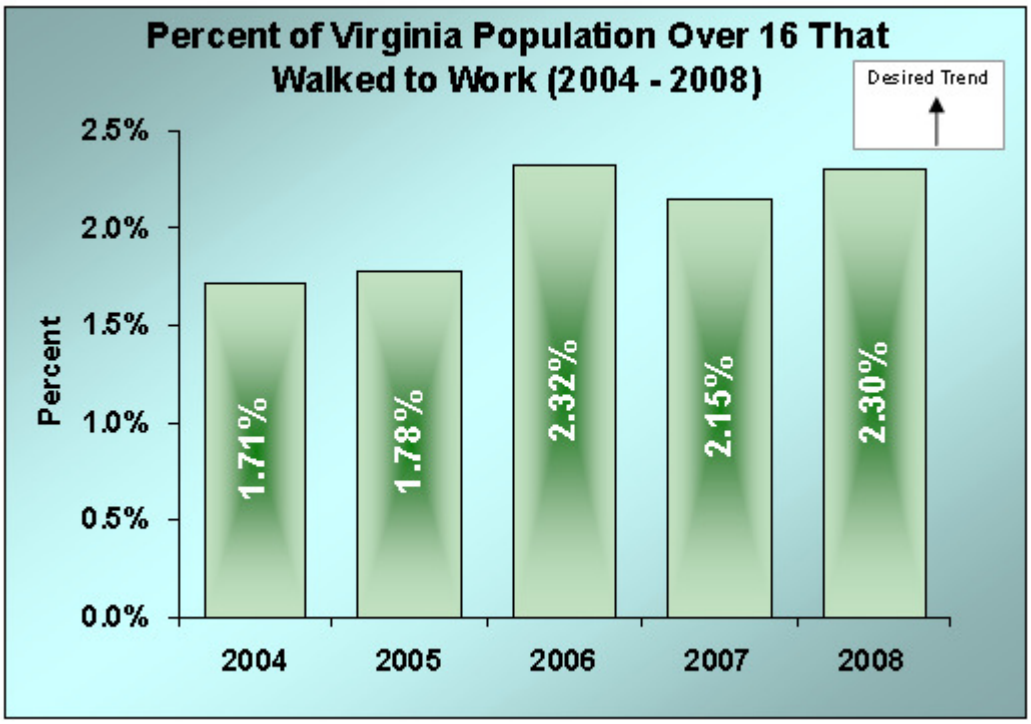


Source: American Community Survey,

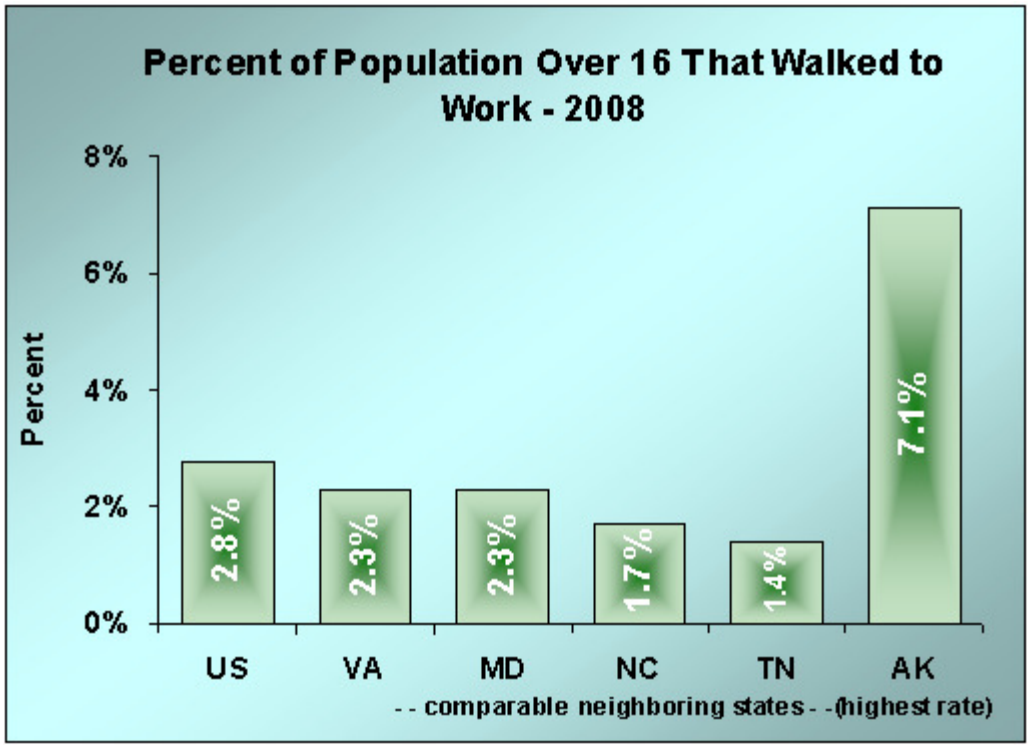
Pedestrian Travel

In 2008, VDOT estimates that over 129 miles of subdivision street sidewalks were made available for public use bringing the total estimate of miles added over the last six years to more than 550.

The 2008 ACS indicates that 2.3% of Virginia's population walked to work, just below the national average. Not surprisingly, more people walk to work in the large metropolitan areas; both the Washington, DC and the Hampton Roads regions exceed the statewide percentage.



Source: American Community Survey



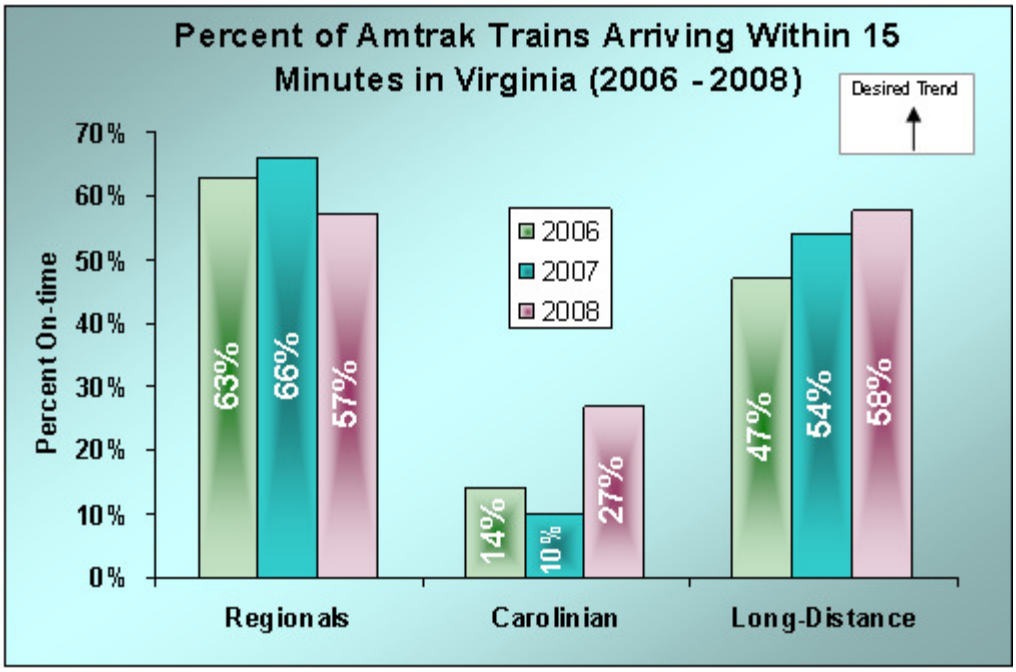
Source: American Community Survey

Intercity Rail Service

In 2008, Amtrak operated 20 daily roundtrip trains and two additional trains that offer service three days a week. Six of these trains are considered long-distance, five of which run from New York City and pass through Virginia before terminating in such places as Miami and Chicago. The Carolinian is a separate route which runs from New York to Newport News, VA. The remaining Amtrak routes provide service from locations within Virginia to Washington, DC's Union Station. In 2008, 1,050,017 passengers either boarded or alighted within the Commonwealth, up 13% from 929,594 in 2007.

On-time performance for the Carolinian and long-distance trains improved in 2008 over the previous year, but still falls short of the on-time performance targets that Amtrak has set for its trains. According to the Amtrak National Fact Sheet, the on-time goal for the Northeast Corridor is an 85% on-time rate while the goal for all service types is an 80% rate.

In Virginia, Amtrak operates on infrastructure owned and operated by freight railroad companies. The poor performance of Amtrak is due mostly to the priority accorded freight trains on these tracks. In addition to addressing performance, DRPT is working to leverage additional train service in Virginia through targeted investment.

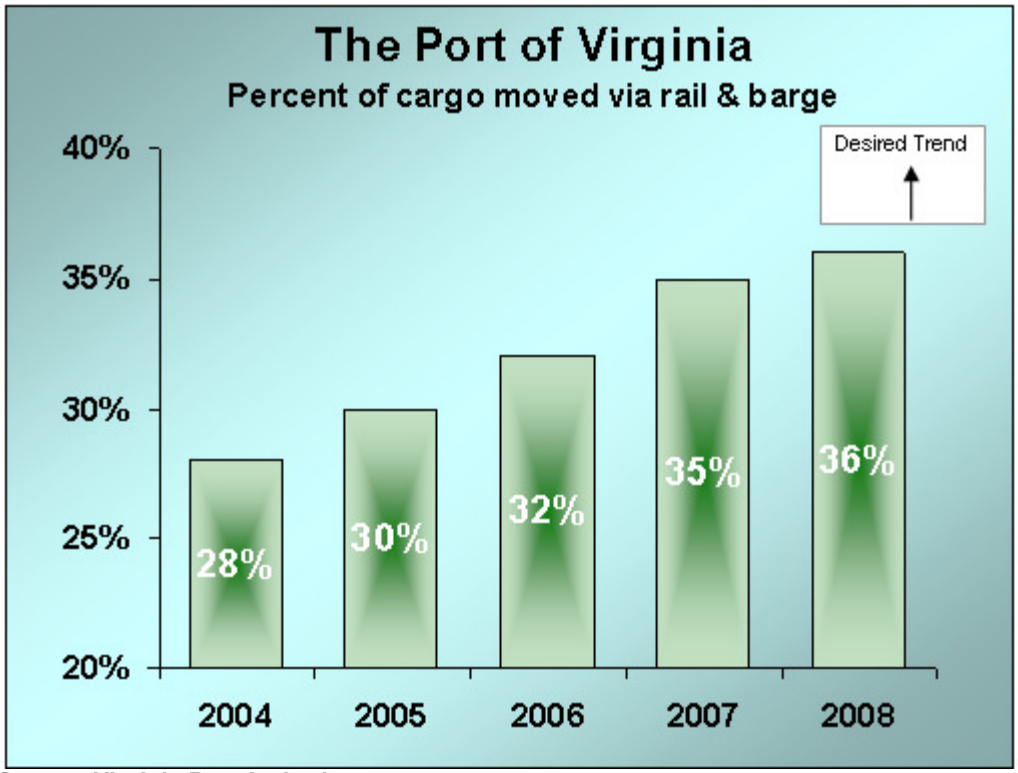


Source: Department of Rail and Public Transportation

Freight Moved Through the Port of Virginia by Rail or Barge

The majority of freight moving in and out of the Port of Virginia is currently transported by truck. To encourage intermodal activity, the Virginia Port Authority (VPA) has established a rail target of 50% at the Craney Island facility

In 2008, 31% of goods moved through the Port via rail (up from 24% in 2005), the fastest growing segment of the Port's business, and 36% were moved by a combination of rail and barge modes.



Source: Virginia Port Authority

Performance Summary

Grade = C

Performance Measure		Desired Trend	Performance Trend
Annual Hours of Delay	Hampton Roads / Virginia Beach	↓	↓
	Northern Virginia	↓	↑
	Richmond area	↓	→
Transit Trips per Capita		↑	→
Transit Revenue Miles		↑	↑
HOV Usage	Hampton Roads / Virginia Beach	↑	↓
	Northern Virginia	↑	↓
Park and Ride Spaces		↑	↑
Bicycle Travel		↑	→
Pedestrian Travel		↑	→
Intercity Rail Service		↑	→
Port of Virginia Rail & Barge Cargo		↑	↑